PARADYNE®

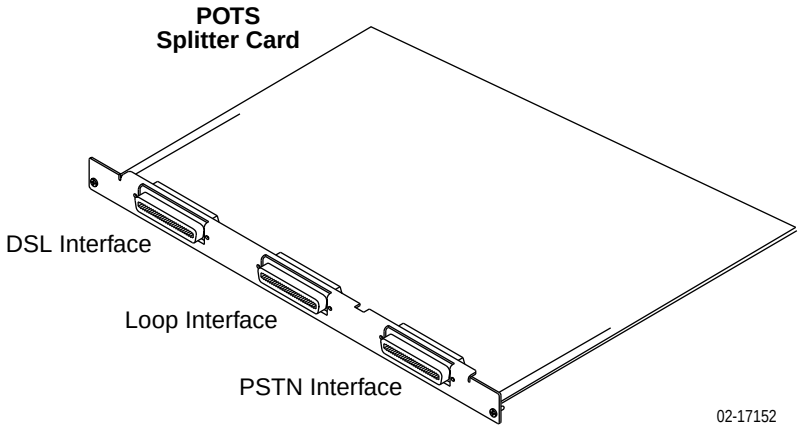
BitStorm™ 6051 POTS Splitter
Installation Instructions

Document Number 6051-A2-GZ40-10

July 2002

About the BitStorm 6051 POTS Splitter

The BitStorm™ system enables simultaneous high-speed digital data access and analog voice service over the same twisted-pair telephone line. The BitStorm 6051 POTS (plain old telephone service) splitter card separates the DSL (Digital Subscriber Line) and POTS frequencies. It provides service to up to 24 DSL ports.



POTS Splitter Chassis

The BitStorm POTS splitter card is mounted in a POTS splitter chassis. Two chassis models are available:

- **Chassis Model 5011** – 1-slot chassis which can be placed on a tabletop or installed in a rack.
- **Chassis Model 5016** – 6-slot chassis which must be installed in a commercial EIA-standard 19″ or 23″ rack or cabinet.

Product-Related Documents

Paradyne documents are available on the World Wide Web at **www.paradyne.com**. Select *Library* → *Technical Manuals* → *BitStorm DSL Systems*.

Refer to the following documents for information about the BitStorm 4800 IP DSLAM.

Document Number	Document Title
4800-A2-GB20	*BitStorm 4800 User's Guide*
4800-A2-GN10	*BitStorm 4800 Management Module Installation Instructions*
4821-A2-GN20	*BitStorm 4800 Installation Guide*

To order a paper copy of a Paradyne document:

- Within the U.S.A., call 1-800-PARADYNE (1-800-727-2396)
- Outside the U.S.A., call 1-727-530-8623

Installation Overview

Installation of the POTS splitter card requires the following steps:

- ❑ Determining the cables you need
- ❑ Preparing the installation location and checking the package contents
- ❑ Installing the POTS splitter chassis
- ❑ Inserting the POTS splitter card(s) into the chassis
- ❑ Connecting the cabling from the POTS splitter card connectors to the BitStorm 4800, local loop, and in-building wiring
- ❑ Securing the cables

Be sure to register your warranty at **www.paradyne.com/warranty**.

Cables You Need

Each of the three POTS Splitter card interfaces requires a 50-conductor cable with a 50-pin Telco connector:

- **DSL interface** connects to the DSL PORTS connector of a BitStorm 4800. The 24-port BitStorm 4800 has one DSL PORTS connector on its rear panel, and the 48-port BitStorm 4800 has two connectors.
- **Loop interface** connects to the in-building POTS and ADSL customer premises equipment (CPE).
- **PSTN interface** connects to the PBX or PSTN.

Use a minimum of 24 AWG (0.205 mm^2).

Preparation

The installation location should be well ventilated, clean, and free of environmental extremes. Allow clearance at the front of the POTS splitter chassis to provide access to the cables.

Read the *Important Safety Instructions* on page 17.

Tools Required

- A small #1 or #2 Phillips screwdriver to tighten the POTS splitter card fasteners.
- A large #3 or #4 Phillips screwdriver to install the chassis into a rack.
- A flat-blade screwdriver to install the chassis grounding wire.

POTS Splitter Card Package Checklist

Verify that your POTS splitter card package contains the following:

❑ BitStorm 6051 POTS splitter card

❑ Plastic bag with three of each item:

— Plastic tie-wrap anchors

— #4-40 x 1/4″ screws

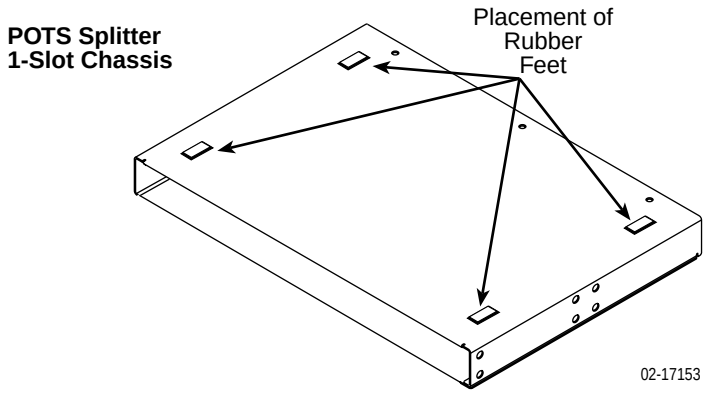
— #4-40 x 1/4″ jack screws

— 8″ cable tie wraps

1-Slot 5011 POTS Splitter Chassis Package Checklist

Verify that your 1-slot POTS splitter chassis package contains the following:

- ❑ 1-slot POTS splitter chassis
- ❑ Two brackets for 19″ racks and two brackets for 23″ racks
- ❑ Small plastic bag with:
  - — Six #10-32 x 1/4″ Phillips flat-head mounting screws
  - — Four #10-32 x 1/2″ Phillips-head mounting screws
  - — Four #12-24 x 1/2″ Phillips-head mounting screws
  - — Four #12-24 self-retaining nuts
  - — Four black rubber feet



NOTE:

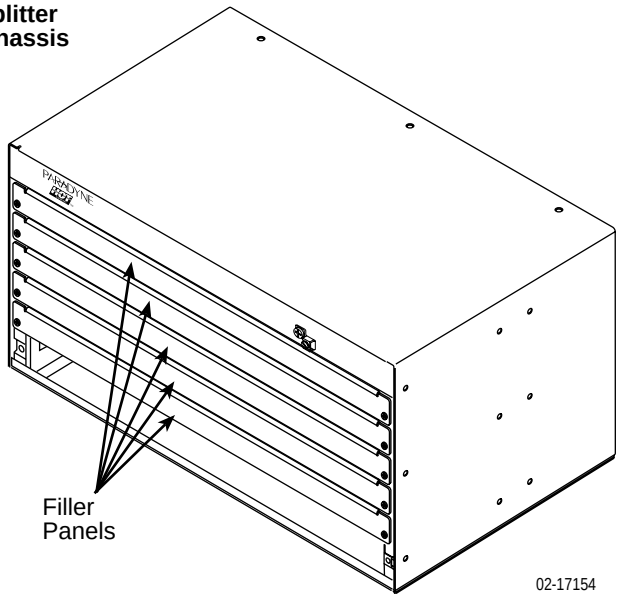
If your 1-slot 5011 POTS splitter chassis is being placed on a tabletop, install the rubber feet as shown above. Discard the rubber feet for a rack-mounted chassis.

6-Slot 5016 POTS Splitter Chassis Package Checklist

Verify that your 6-slot POTS splitter chassis package contains the following:

- ❑ 6-slot POTS splitter chassis with five filler panels. Each filler panel is attached to the chassis with two 1/4-turn fasteners. Keep filler panels installed in all unused slots.
- ❑ Two brackets for 19″ (483 mm) racks and two brackets for 23″ (584 mm) racks
- ❑ Small plastic bag with:
  - — Six #10-32 x 1/4″ Phillips flat-head mounting screws
  - — Four #10-32 x 1/2″ Phillips-head mounting screws
  - — Four #12-24 x 1/2″ Phillips-head mounting screws
  - — Four #12-24 self-retaining nuts
  - — Four black rubber feet (discard)

POTS Splitter 6-Slot Chassis



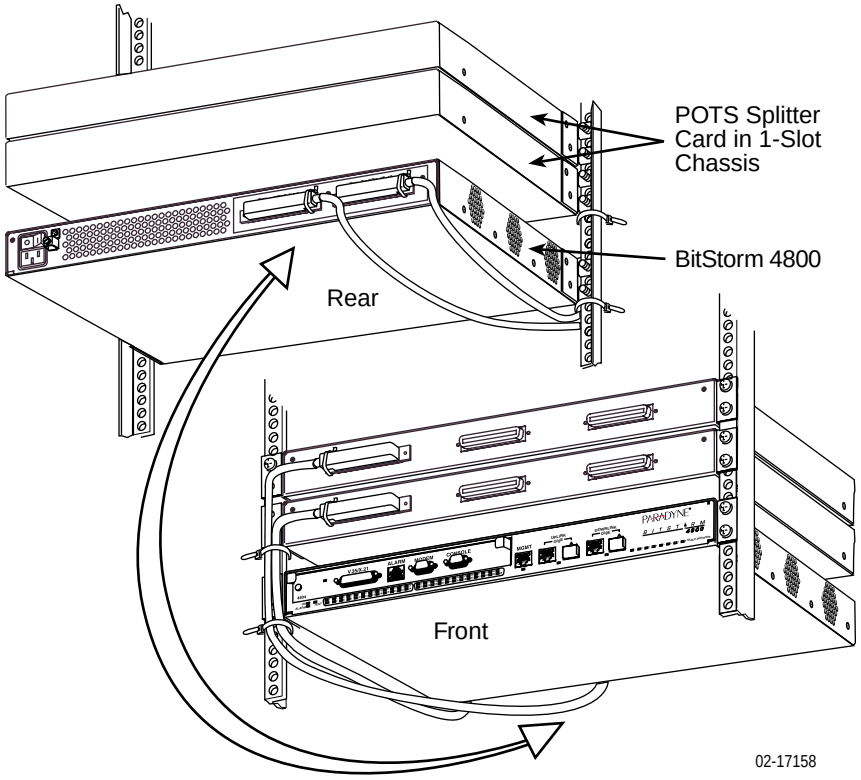
POTS Splitter Chassis Installation

Both the POTS splitter chassis and the BitStorm 4800 are shipped with mounting brackets that allow them to be mounted in a 19″ (483 mm) or 23″ (584 mm) cabinet or rack.

In preparation for bracket and chassis installation, determine:

- Whether the equipment will be rack-mounted.
- Width of the rack: 19″ (483 mm) or 23″ (584 mm).
- Chassis position in the rack: center-mounted or front-mounted. Center-mounting is recommended for convenient access to cables.
- Whether the rack has mounting rails with threaded or non-threaded screw holes.
- The number of POTS splitters required. The BitStorm 4800 comes in a 24-port and a 48-port model, requiring one or two POTS splitter chassis, respectively.

The 48-port BitStorm 4800 and two 6051 POTS splitters are pictured.



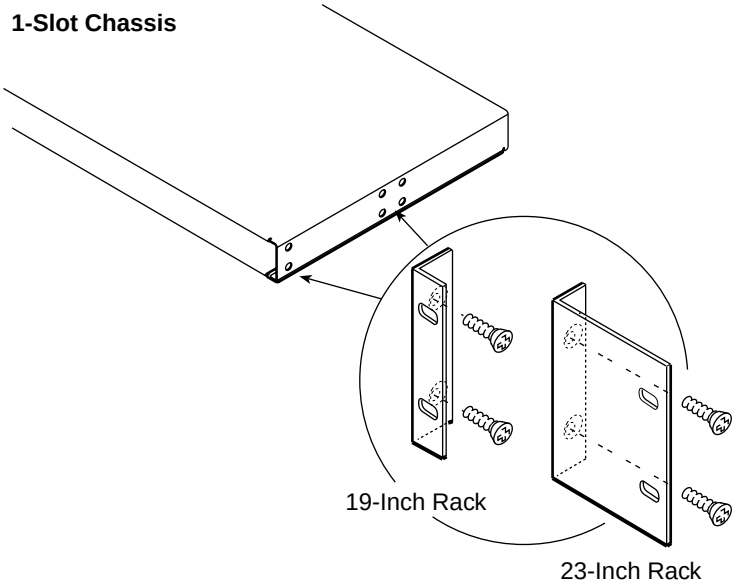
NOTE:

Install chassis in the rack from the bottom up to maintain stability.

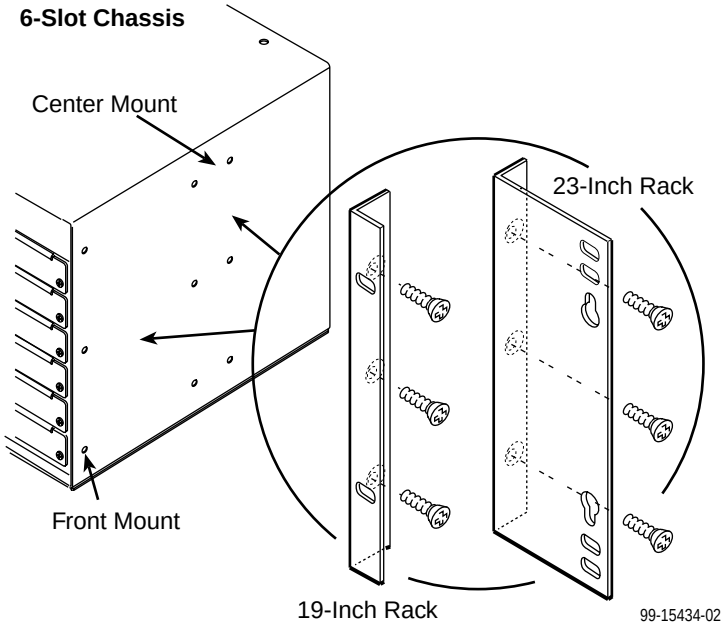
Installing the Brackets

The brackets can be installed in the chassis in a center-mounted or front-mounted configuration. Mounting holes are provided in the chassis for either configuration. Install the appropriate 19″ (483 mm) or 23″ (584 mm) brackets on the 1-slot or 6-slot chassis.

1-Slot Chassis



6-Slot Chassis



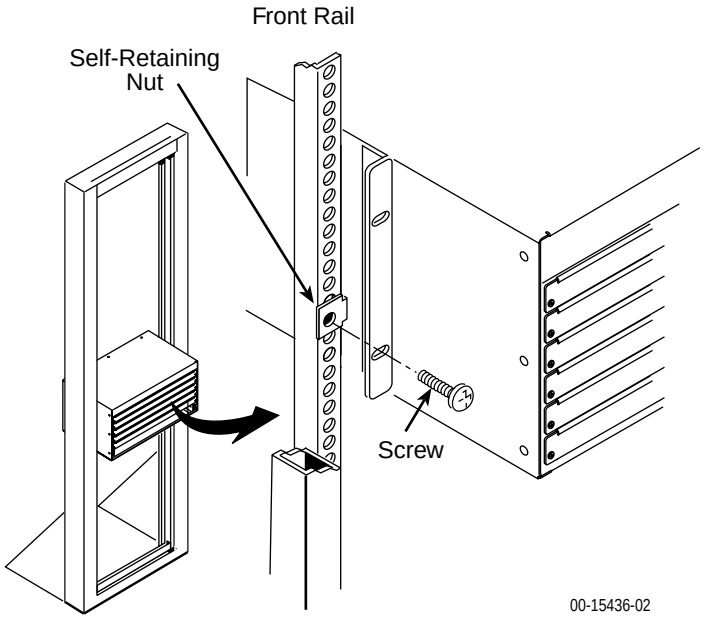
Select one of the next two procedures for chassis installation in a rack.

Installation into a Rack without Threaded Screw Holes

▶ Procedure

After installing the appropriate brackets on the chassis:

1. Determine where the chassis will be placed in the rack. Mark the front rail where the four holes in the mounting brackets will be.
2. Slide a self-retaining nut onto each marked rail hole and align the hole of the nut with the hole in the rail.



3. Line up the chassis mounting brackets with the self-retaining nuts.
4. Loosely install the bottom screws first and then the top screws.
5. Tighten all screws firmly using a Phillips screwdriver.

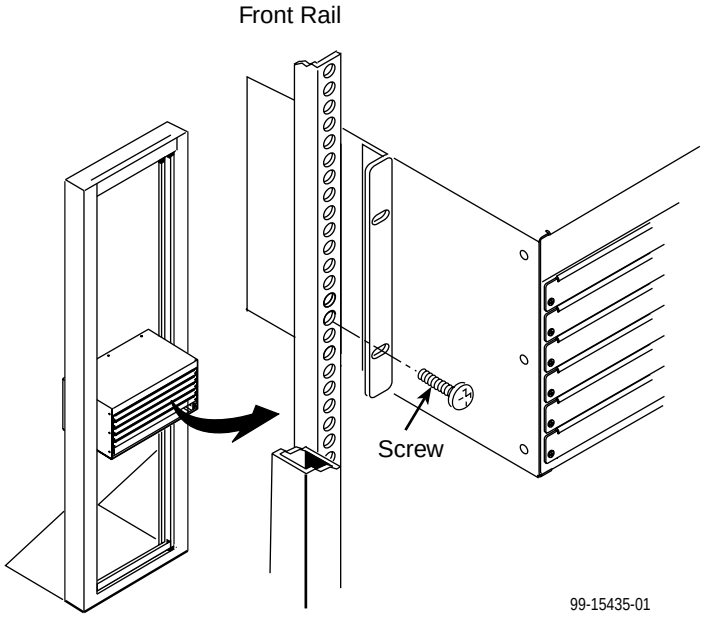
Repeat the process for each POTS splitter chassis. POTS splitter chassis can be mounted directly on top of each other.

Installation into a Rack with Threaded Screw Holes

▶ Procedure

After installing the appropriate brackets on the chassis:

1. Determine where the chassis will be placed in the rack.
2. Line up the chassis mounting brackets with the front rail holes.
3. Loosely install the bottom screws first and then the top screws.



4. Tighten all screws firmly with a Phillips screwdriver.

Repeat the process for each POTS splitter chassis. POTS splitter chassis can be mounted directly on top of each other.

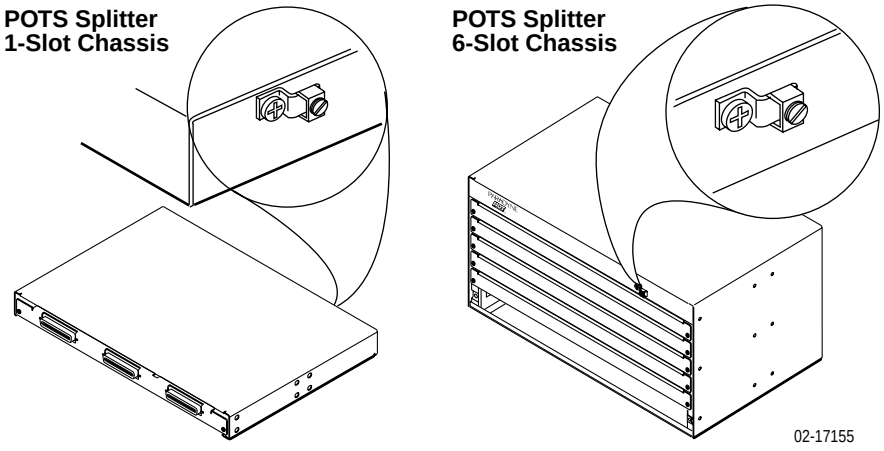
Installing the Ground Wire

To comply with Network Equipment Building System (NEBS) requirements, the ground wire must be installed.

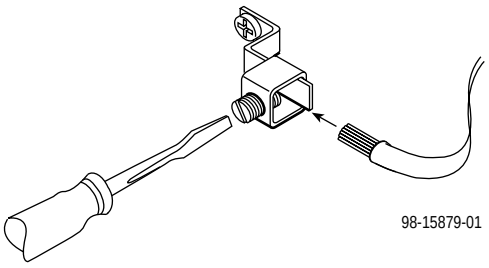
▶ Procedure

1. Obtain copper wire of appropriate wire gauge: 14–10 AWG (2.08–5.26 mm^2).
2. Strip back the insulation approximately 1/4″ (6 mm) on the copper wire.
3. Locate the grounding lug on the chassis:

If you have a . . .	Then the grounding lug is . . .
1-slot chassis	On the rear of the chassis on the left.
6-slot chassis	On the front of the chassis on the top right.



4. Loosen the screw on the grounding lug.
5. Insert the stripped end of the wire into the open end of the grounding lug and tighten the lug's screw. Make sure that the screw is making contact with the stripped portion of the wire.



Installing the POTS Splitter Card

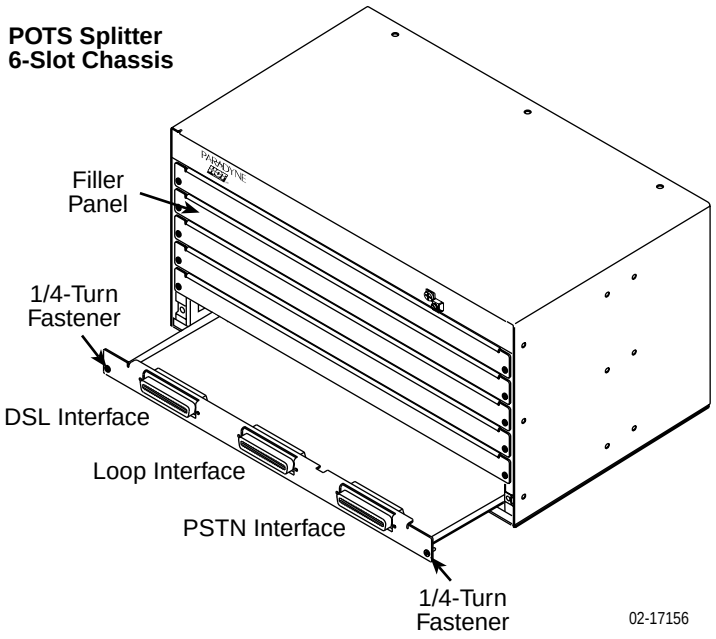
⚠ HANDLING PRECAUTIONS FOR STATIC-SENSITIVE DEVICES

This product is designed to protect sensitive components from damage due to electrostatic discharge (ESD) during normal operation. When performing installation procedures, however, take proper static control precautions to prevent damage to equipment. If you are not sure of the proper static control precautions, contact your nearest sales or service representative.

▶ Procedure

To install a POTS splitter card into the POTS splitter chassis:

1. Remove the slot filler panel, if necessary, by loosening the quarter-turn fastener on either side. Keep filler panels in all unused slots.
2. Slide the POTS splitter card into the chassis.
3. Tighten the quarter-turn fastener on each side of the faceplate of the POTS splitter card.



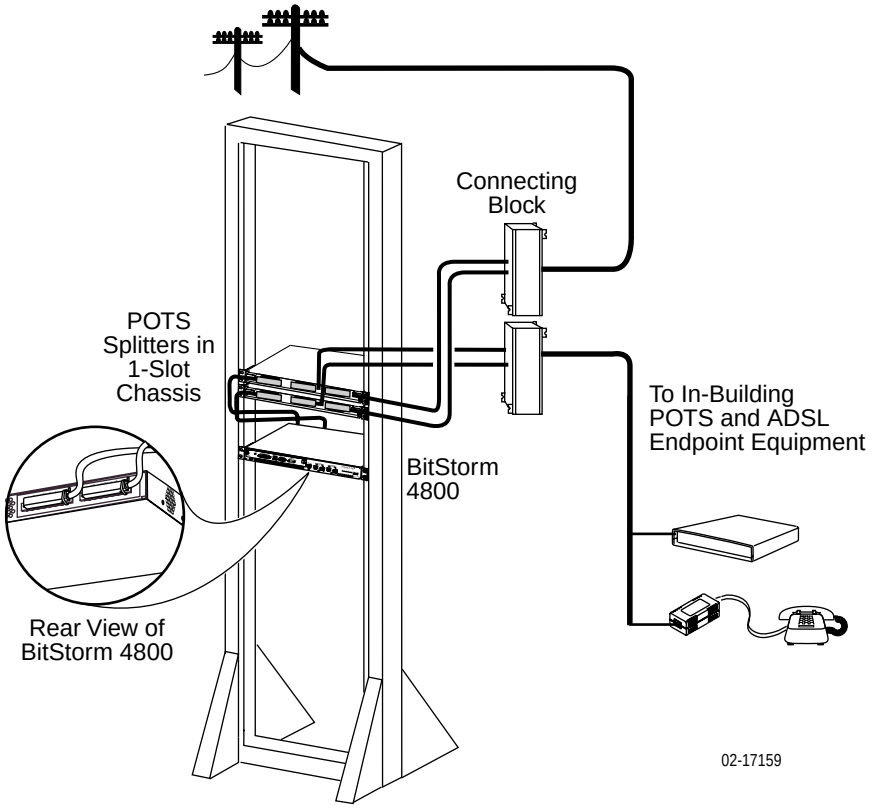
Cabling

▶ Procedure

To cable the BitStorm 6051 POTS splitter:

1. Connect the DSL interface to the DSL PORTS connector of a BitStorm 4800. The 24-port BitStorm 4800 has one DSL PORTS connector on its rear panel, and the 48-port BitStorm 4800 has two connectors.
2. Connect the Loop interface to the in-building POTS and ADSL CPE.
3. Connect the PSTN interface to the PBX or PSTN.

The 48-port BitStorm 4800 and two 6051 POTS splitters are pictured.



See *Cables You Need* on page 3 for information about POTS splitter cabling.

Your CPE modems may require in-line filters. Consult your modem documentation.

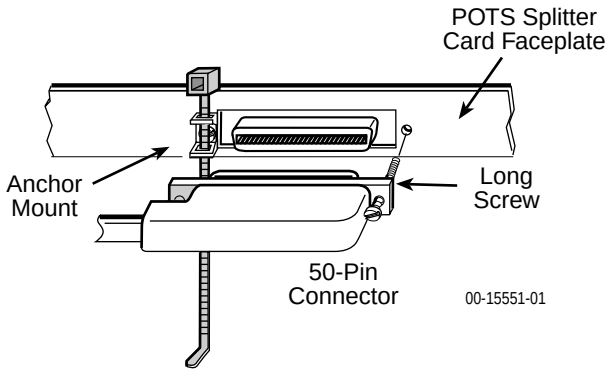
Securing Cables to the POTS Splitter

Cables can be dressed to the left or right depending on the wiring of the cable heads. Make or procure cables suitable for your equipment layout.

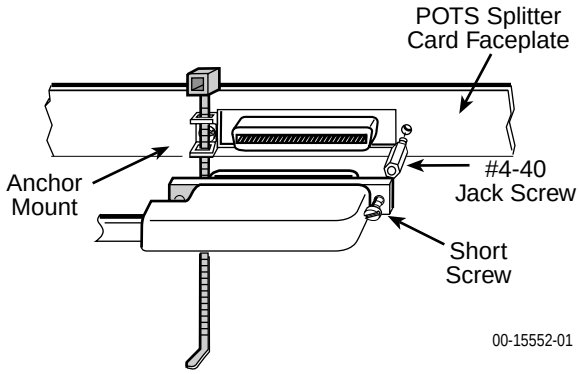
▶ Procedure

To secure a cable to the POTS splitter card:

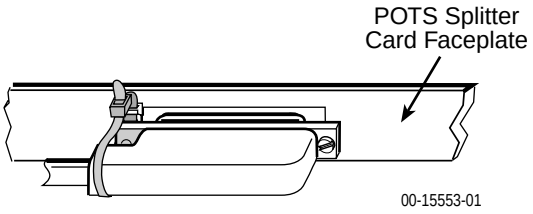
1. Install the plastic tie-wrap anchor mount onto the POTS splitter card faceplate on the cable exit side with the screws provided. Slide the tie wrap through the anchor from the top.
2. Attach the cable head to the POTS splitter connector.
   - — If the connector on the cable has a long screw, tighten the screw directly into the connector located in the circuit card. Discard the jack screws provided.



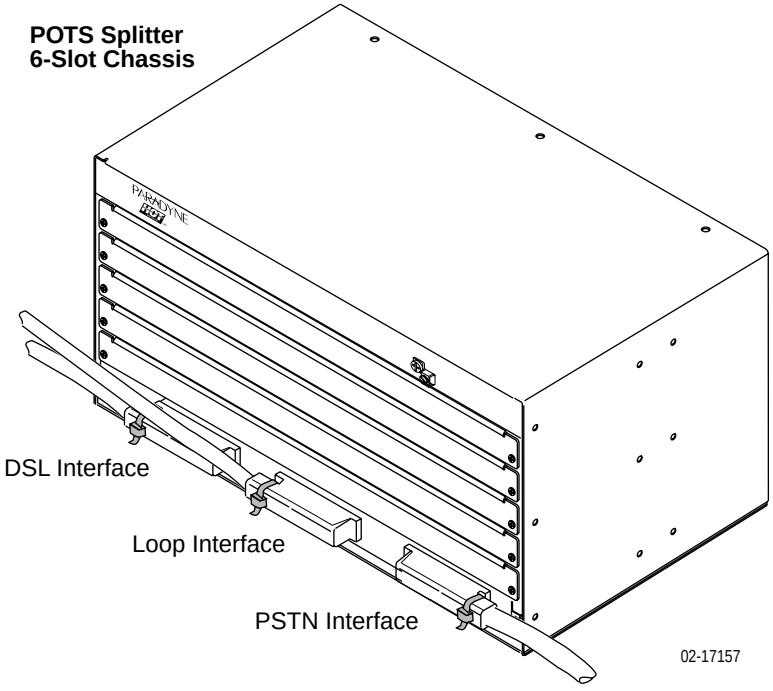
   - — If the connector on the cable has a short screw, install the #4-40 jack screw provided into the threaded hole of the connector in the circuit card. Attach the short screw in the cable to the jack screw and tighten.



3. Tighten the tie wrap and trim the excess.



Repeat the procedure for all the interface cables.

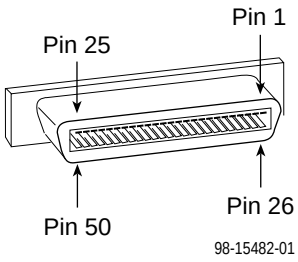


Connector Pin Numbers

Pin assignments are the same for all three connectors on the POTS splitter cards.

50-Position Telco Connector

POTS Splitter #	Pin # Ring	Pin # Tip
1	1	26
2	2	27
3	3	28
4	4	29
5	5	30
6	6	31
7	7	32
8	8	33
9	9	34
10	10	35
11	11	36
12	12	37
13	13	38
14	14	39
15	15	40
16	16	41
17	17	42
18	18	43
19	19	44
20	20	45
21	21	46
22	22	47
23	23	48
24	24	49



Technical Specifications

1-Slot 5011 Chassis Technical Specifications*	
Item	**Specification**
Height x Width x Depth	1.75″ x 17.2″ x 9.94″ (4.45 cm x 43.69 cm x 25.29 cm)
Weight (empty)	2.0 lb (0.71 kg)
Approvals Safety Certifications	 Refer to the equipment's label for approvals on product.
6-Slot 5016 Chassis Technical Specifications*	
Height x Width x Depth	8.72″ x 17.2″ x 9.94″ (22.15 cm x 43.69 cm x 25.29 cm)
Weight (empty)	6.0 lb (2.13 kg)
Approvals Safety Certifications	 Refer to the equipment's label for approvals on product.
6051 POTS Splitter Card Technical Specifications*	
Height x Width x Depth	1.07″ x 15.77″ x 9.77″ (2.72 cm x 40.06 cm x 24.82 cm)
Weight	2.6 lb (1.19 kg)
Physical Environment Operating temperature Storage temperature Relative humidity Shock and vibration	 0° C to 50° C (32° F to 122° F) –20° C to 70° C (–4° F to 158° F) 15% to 90% (noncondensing) Withstands normal shipping and handling

* Technical Specifications subject to change without notification.

⚠ Important Safety Instructions

1. Read and follow all warning notices and instructions marked on the product and included in this manual.
2. Use a Listed/Certified minimum 24 AWG (0.205 mm^2) wire for connection to the interface connectors.
3. This equipment is to be connected behind the telephone line primary protector.
4. Do not attempt to install or service this product yourself, as opening or removing covers may expose you to dangerous high-voltage points or other risks. Refer all installation and servicing to qualified service personnel.
5. When installed in the final configuration, the product must comply with the applicable Safety Standards and regulatory requirements of the country in which it is installed. If necessary, consult with the appropriate regulatory agencies and inspection authorities to ensure compliance.
6. In addition, since the equipment is to be used with telecommunications circuits, take the following precautions:
   - — Never install telephone wiring during a lightning storm.
   - — Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
   - — Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
   - — Use caution when installing or modifying telephone lines.
   - — Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
   - — Do not use the telephone to report a gas leak in the vicinity of the leak.

CE Marking

When the product is marked with the CE mark, this demonstrates full compliance with the following European Directives:

- **Directive 72/72/33C** – Council Directive of 19 February 1973 on the harmonization of the laws of the member states relating to electrical equipment designed for use within certain voltage limits, as amended by Directive 93/68EEC.

Warranty, Sales, Service, and Training Information

Contact your local sales representative, service representative, or distributor directly for any help needed. For additional information concerning warranty, sales, service, repair, installation, documentation, training, distributor locations, or Paradyne worldwide office locations, use one of the following methods:

- **Internet:** Visit the Paradyne World Wide Web site at **www.paradyne.com**. (Be sure to register your warranty at **www.paradyne.com/warranty**.)
- **Telephone:** Call our automated system to receive current information by fax or to speak with a company representative.
  - — Within the U.S.A., call 1-800-870-2221
  - — Outside the U.S.A., call 1-727-530-2340

Document Feedback

We welcome your comments and suggestions about this document. Please mail them to Technical Publications, Paradyne Corporation, 8545 126th Ave. N., Largo, FL 33773, or send e-mail to **userdoc@paradyne.com**. Include the number and title of this document in your correspondence. Please include your name and phone number if you are willing to provide additional clarification.

Trademarks

BitStorm is a trademark of Paradyne Corporation. All other products and services mentioned herein are the trademarks, service marks, registered trademarks, or registered service marks of their respective owners.

6051-A2-GZ40-10